

What is claimed is:

1. An optical recording medium comprising at least:
  - a supporting substrate;
  - a recording layer on the supporting substrate, the recording layer containing an organic compound as a major component; and
  - a light-transmitting layer on the recording layer, the light-transmitting layer being capable of transmitting laser light with a wavelength of 390 to 420 nm for recording and reproducing information,wherein the organic compound in the recording layer includes a trimethine cyanine dye that has the minimum value  $n_{\min}$  of its refractive index  $n$  (real part of the complex refractive index) within the range of 370 to 425 nm and has a refractive index  $n$  of 1.2 or lower with respect to the wavelength of the recording/reproducing laser light, and the organic compound, when absorbing the laser light, melts or degrades to bring about a change in the refractive index, thereby effecting recording of the information.
2. The optical recording medium according to claim 1, wherein, at the wavelength of the reproducing laser light, the melting or the degradation of the organic compound causes an increase in the refractive index  $n$  of

the organic compound.

3. The optical recording medium according to claim 1, wherein the organic compound has an extinction coefficient  $k$  (imaginary part of the complex refractive index) of 0.15 or above, with respect to both the wavelength of the recording laser light and the wavelength of the reproducing laser light.

4. The optical recording medium according to claim 1, wherein the trimethine cyanine dye contains a trimethine chain with two nitrogen-containing heterocyclic rings positioned on ends of the trimethine chain, one of the two nitrogen-containing heterocyclic rings being selected from the group consisting of benzoxazole, thiazoline, and thiazole, and the other of the two heterocyclic rings being selected from the group consisting of benzoxazole, benzimidazole, indolenine, thiazoline, and thiazole.

5. The optical recording medium according to claim 1, wherein the trimethine cyanine dye contains a trimethine chain with two nitrogen-containing heterocyclic rings positioned on ends of the trimethine chain, the two nitrogen-containing heterocyclic rings being identical to one another.

6. The optical recording medium according to claim 1, wherein the recording layer contains, in addition

to the organic compound, a quencher.

7. An optical recording/reproducing method, comprising the steps of:

providing an optical recording medium comprising at least a supporting substrate; a recording layer on the supporting substrate, the recording layer containing an organic compound as a major component; and a light-transmitting layer on the recording layer, the light-transmitting layer being capable of transmitting laser light with a wavelength of 390 to 420 nm for recording and reproducing information, wherein the organic compound in the recording layer includes a trimethine cyanine dye that has the minimum value  $n_{\min}$  of its refractive index  $n$  (real part of the complex refractive index) within the range of 370 to 425 nm and has a refractive index  $n$  of 1.2 or lower with respect to the wavelength of the recording/reproducing laser light, and the organic compound, when absorbing the laser light, melts or degrades to bring about a change in the refractive index;

irradiating a recording laser light of 390 to 420 nm onto the optical recording medium from the light-transmitting layer side thereof to effect recording of the information, whereupon the refractive index  $n$  of the organic compound with respect to the wavelength of reproducing laser light of 390 to 420 nm is raised in the

area irradiated with the recording laser light; and

subsequent to the recording step, irradiating the reproducing laser light of 390 to 420 nm onto the optical recording medium from the light-transmitting layer side thereof to effect reproducing of the information.